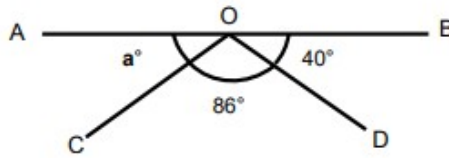
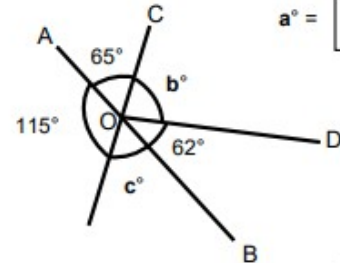


Calculate the missing angles on your sheet – use your calculators for speed!

7. Given that AOB is a straight line, find the missing angles in these diagrams:

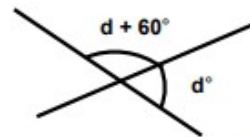


$$a^\circ = \boxed{54^\circ}$$

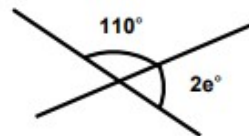


$$b^\circ = \boxed{53^\circ} \quad c^\circ = \boxed{65^\circ}$$

8. Use the diagrams to work out the values of d and e:



$$d^\circ = \boxed{60^\circ}$$

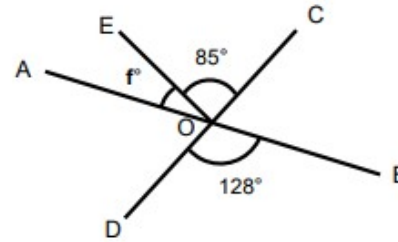


$$e^\circ = \boxed{35^\circ}$$

9. Explain why it is impossible for an acute angle to be half of a reflex angle.

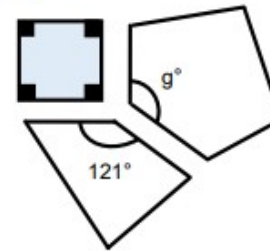
Max acute = 89. Double this is 178.
Minimum reflex = 181.

10. Given that AOB and COD are straight lines, find the value of the angle marked f.



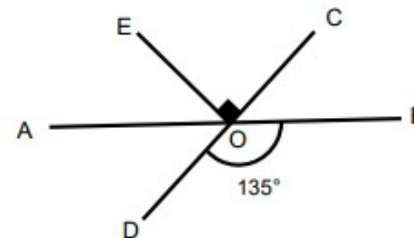
$$f^\circ = \boxed{43^\circ}$$

11. These three shapes fit together without any gaps. Calculate the size of the angle labelled g.



$$g^\circ = \boxed{149^\circ}$$

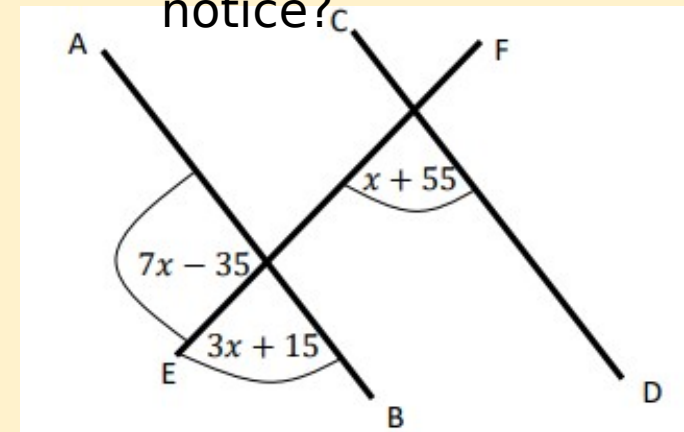
12. Given that AOB and COD are straight lines. Work out the size of acute angle AOE.



$$AOE = \boxed{45^\circ}$$

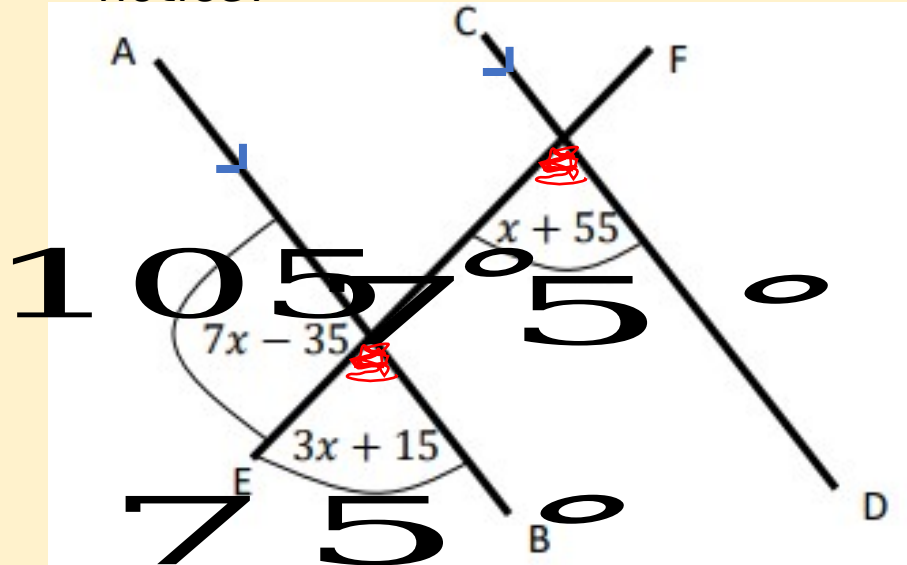


Find the size of each angle – what do you notice?





Find the size of each angle - what do you notice?



$$10x - 20 = 180$$

$$10x = 200$$

$$x = 20$$

Angles are equal

What do you notice about the lines AB and CD?

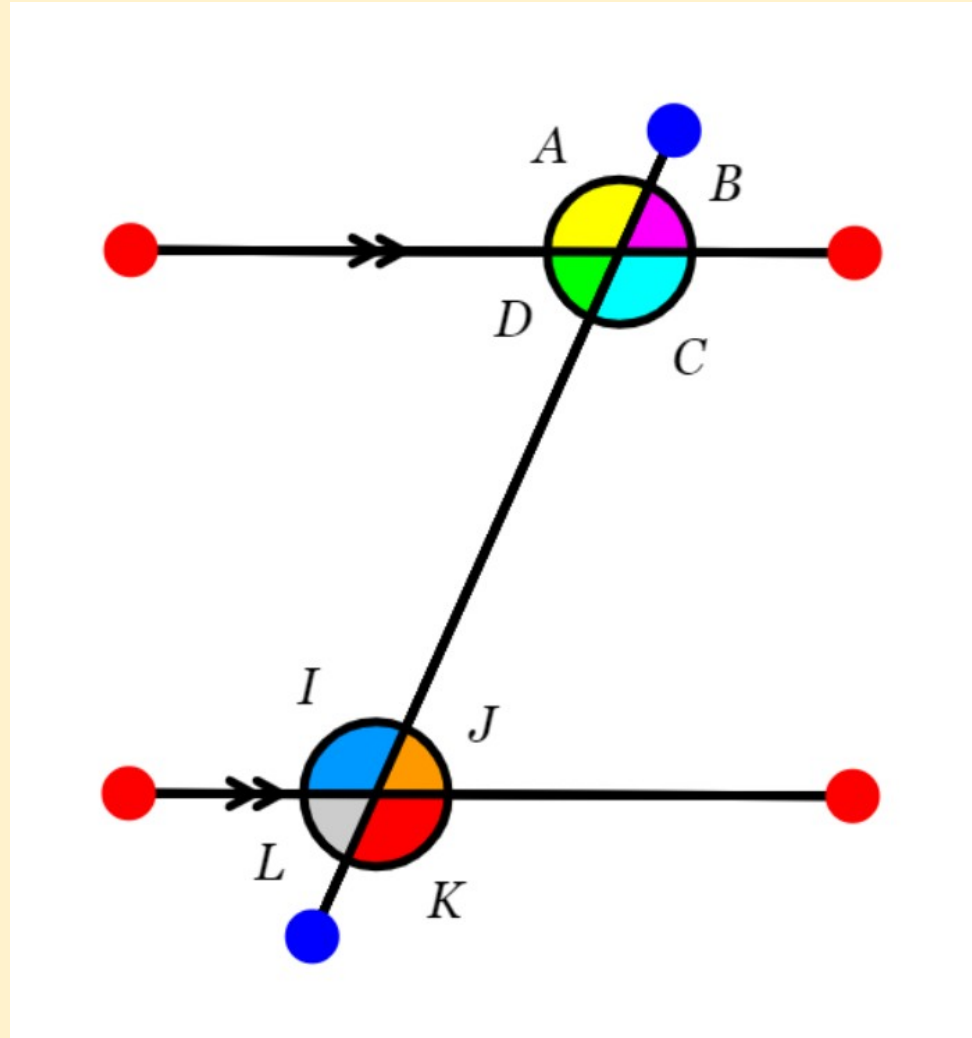
Aim: Investigating Angles on parallel lines

What angle rules do we already know?

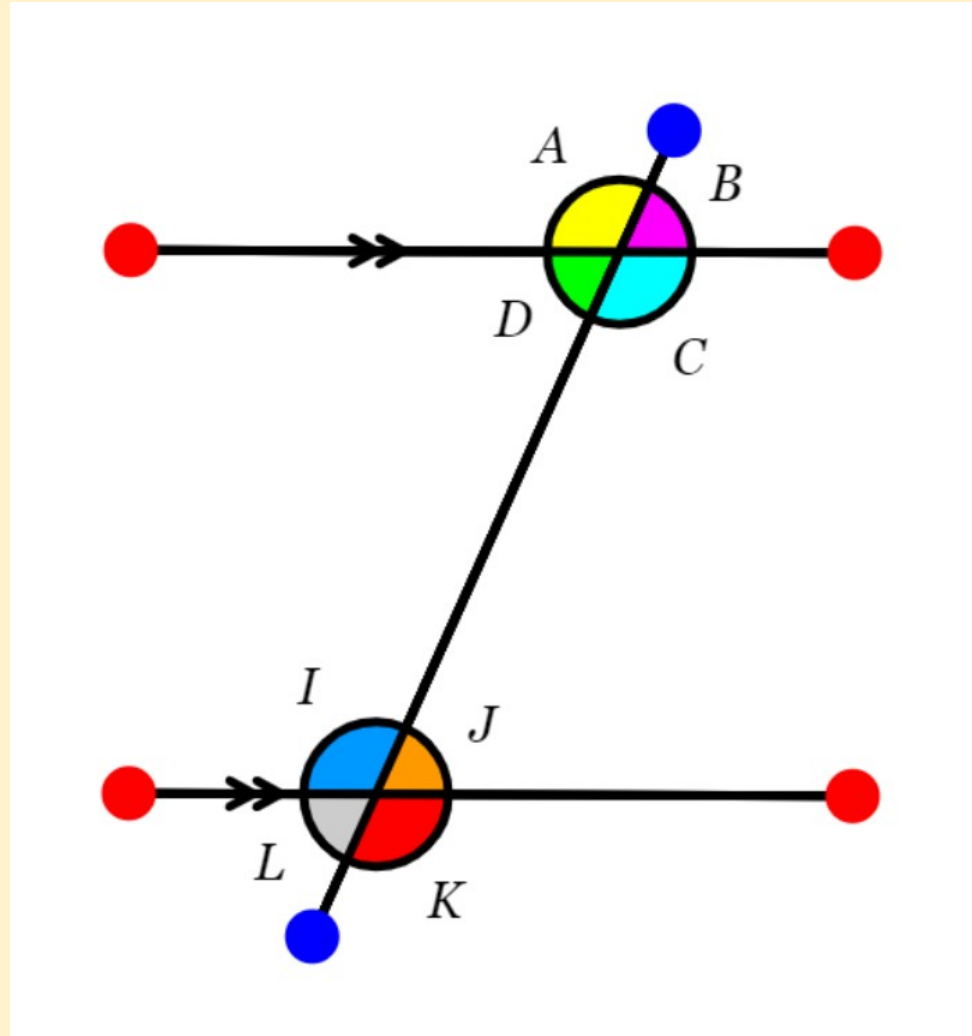
When a line passes through 2 (or more) parallel lines, the angles that are formed follow certain rules, let's see what we can find out...

1. Draw 2 parallel lines in your book
2. Draw a straight line that passes through both of the lines you have drawn
3. Looking at your diagram, can you predict what might be true about the angles formed?

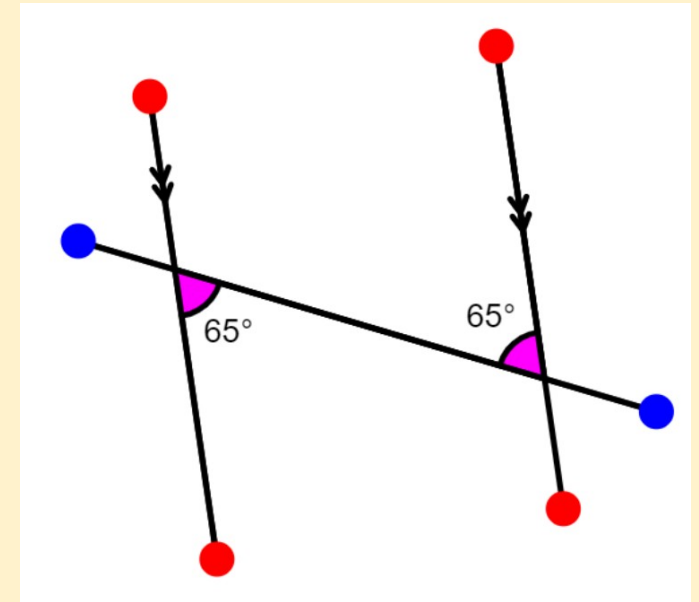
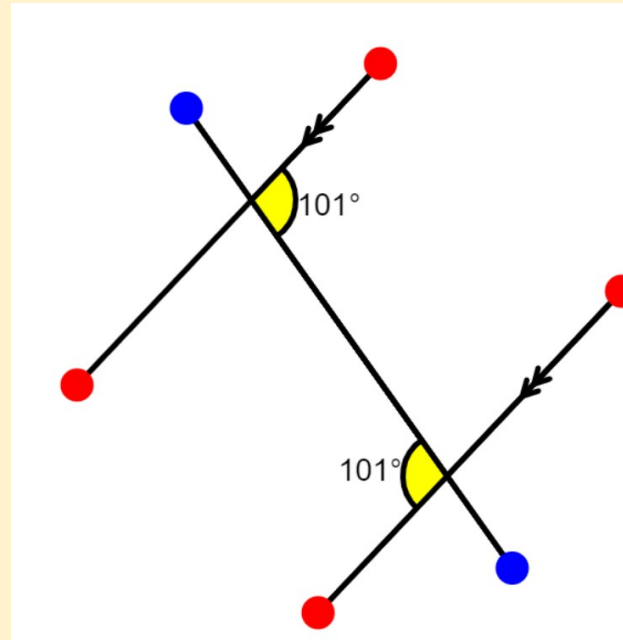
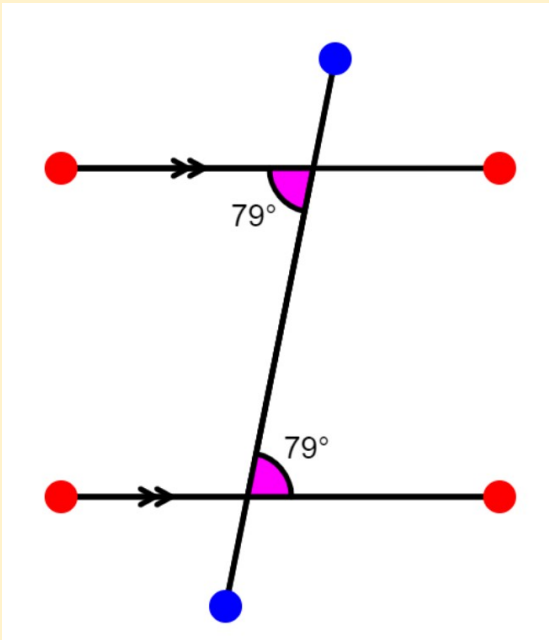
What predictions did you make?



Were you correct?

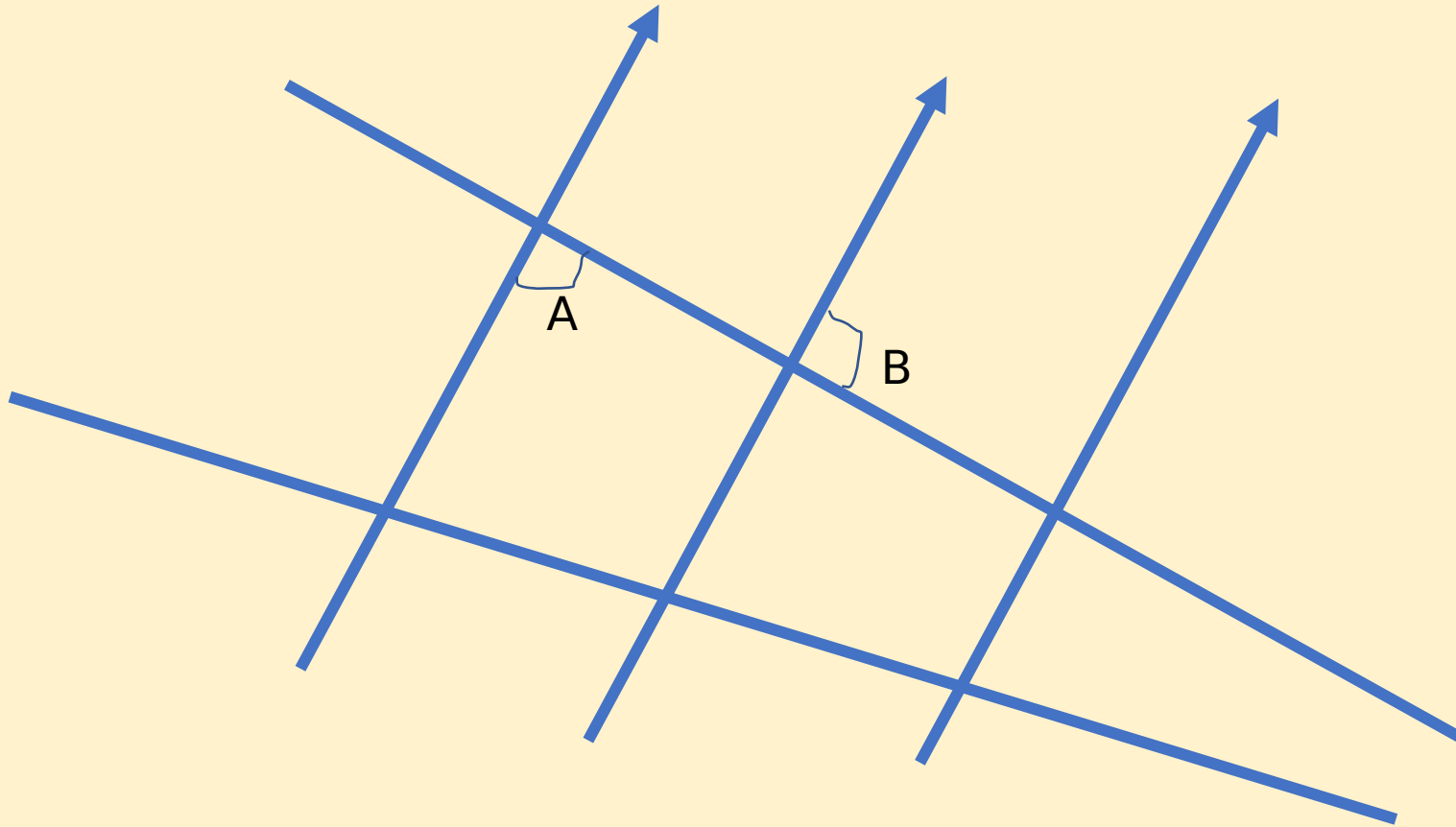


1. Alternate angles



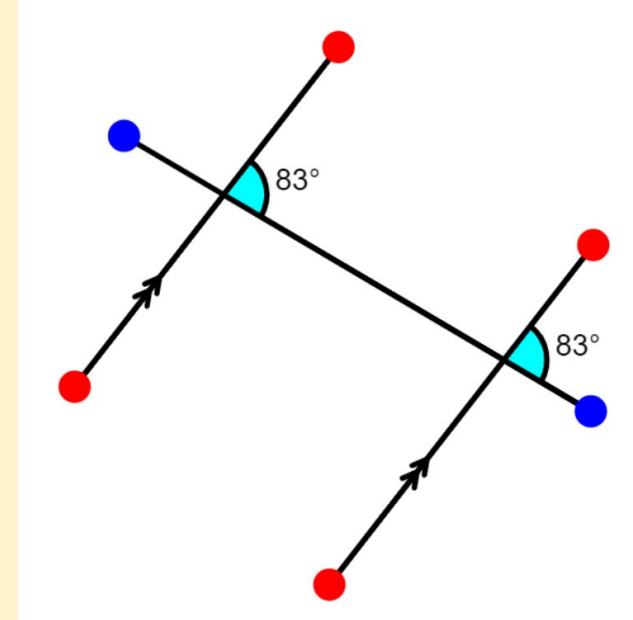
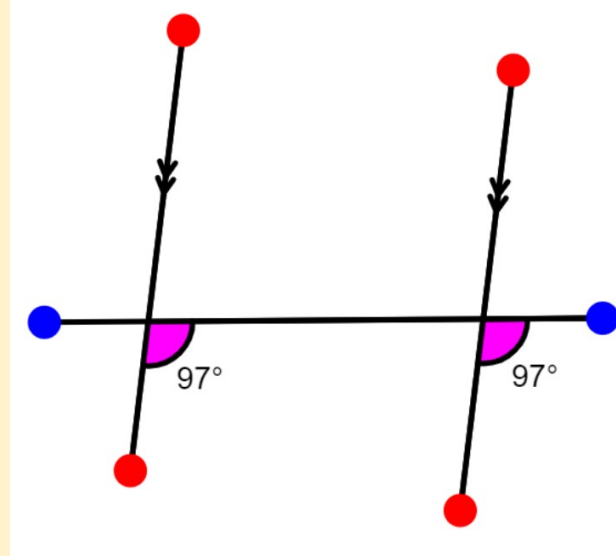
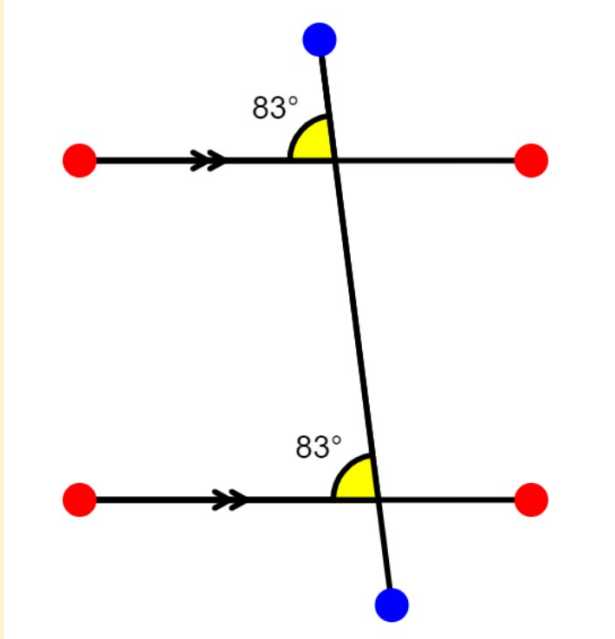
Alternate angles are equal.

Where are the alternate angles?



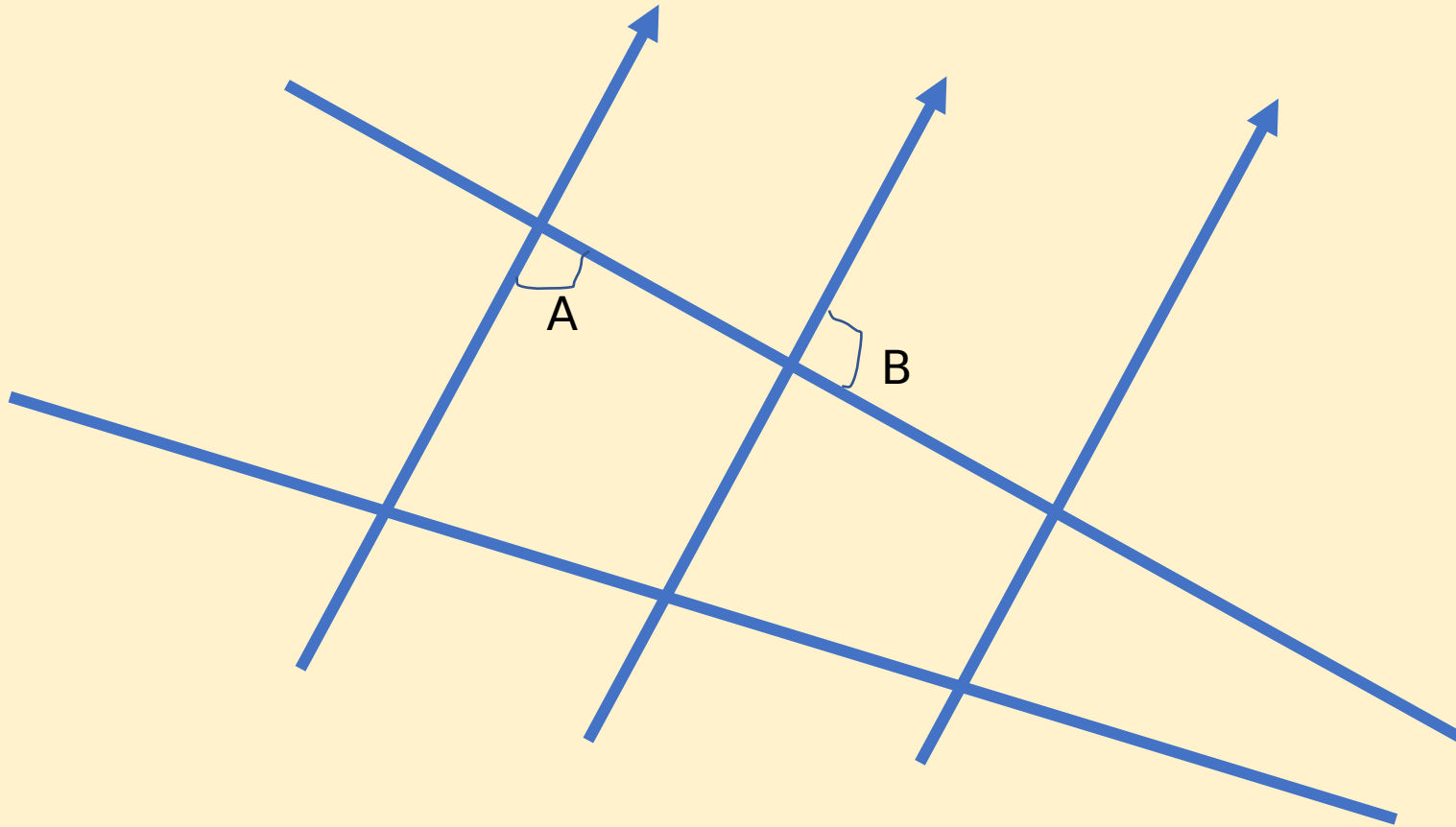
2

Corresponding angles

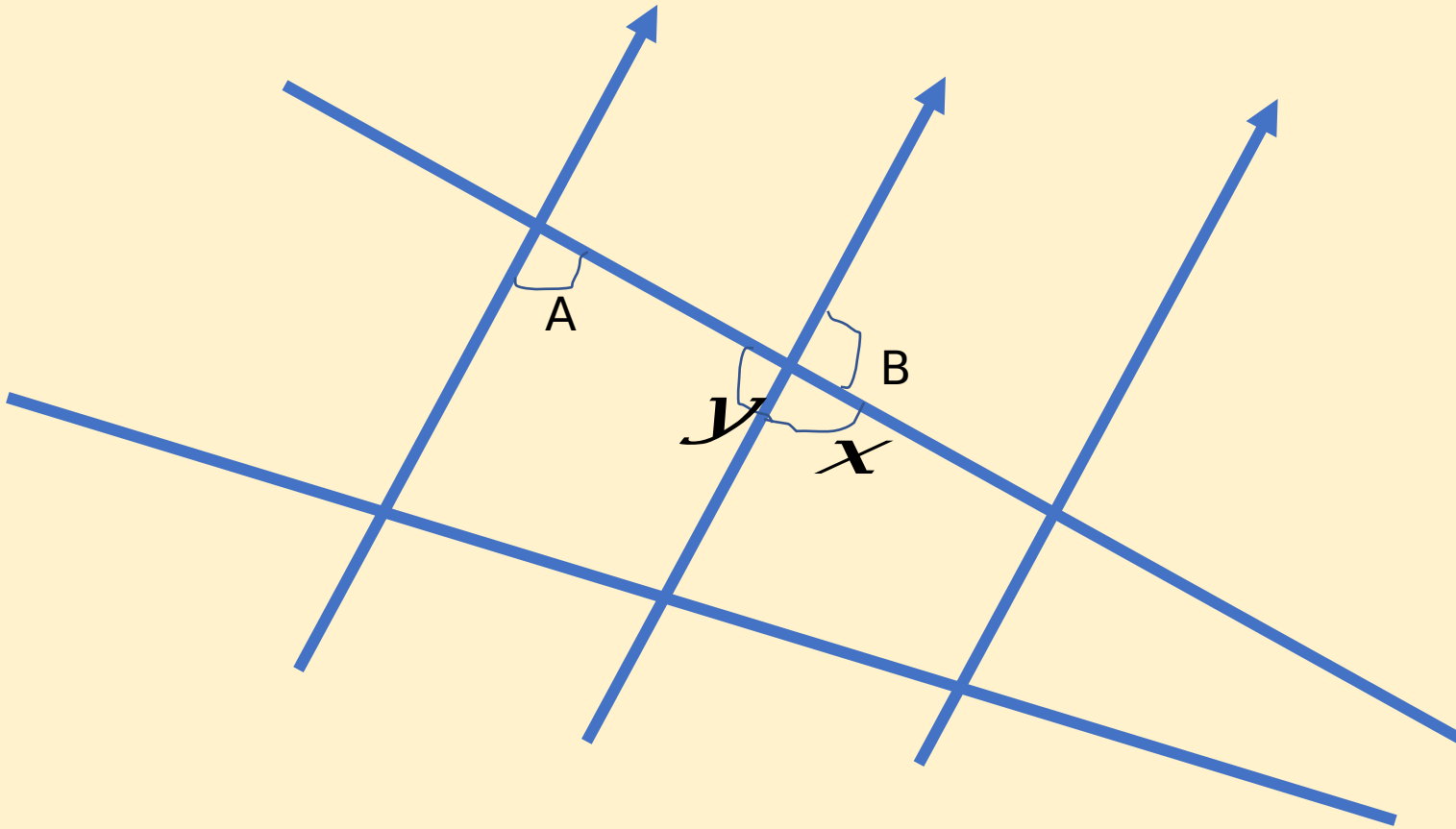


Corresponding angles are equal.

Where are the corresponding angles?



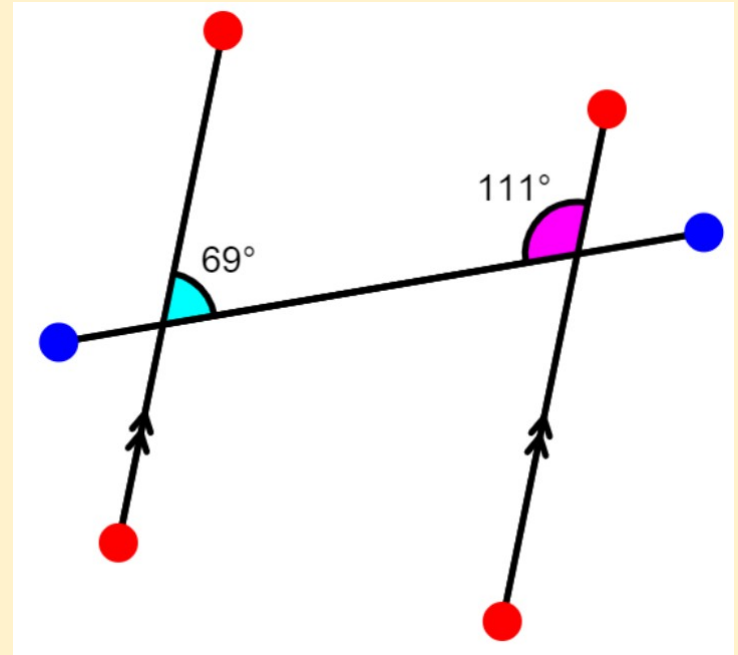
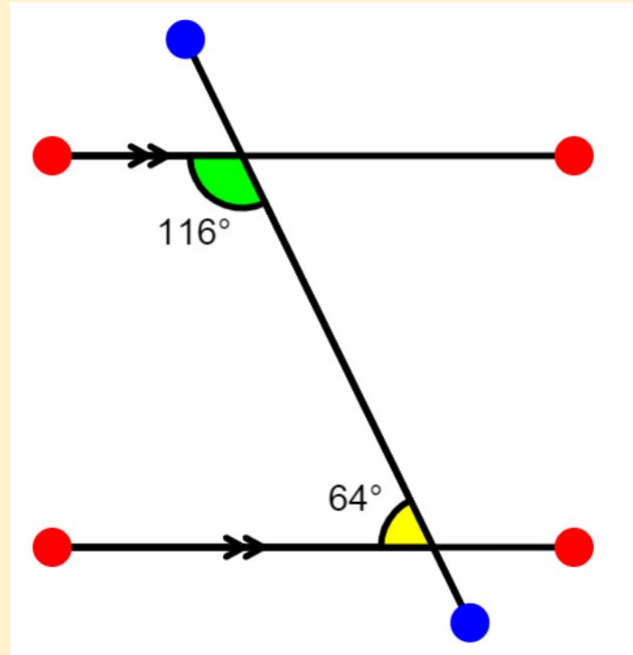
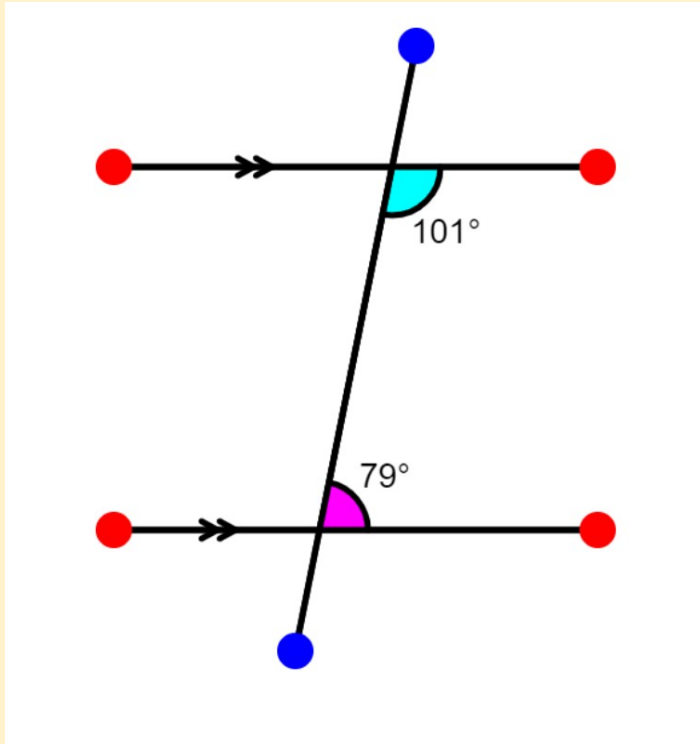
Use the diagram to complete the sentences...



is the same as _____

is the same as _____

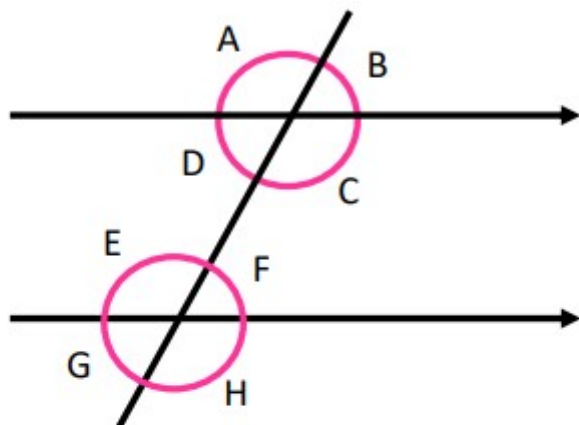
3. Cointerior angles



Cointerior angles sum to 180.

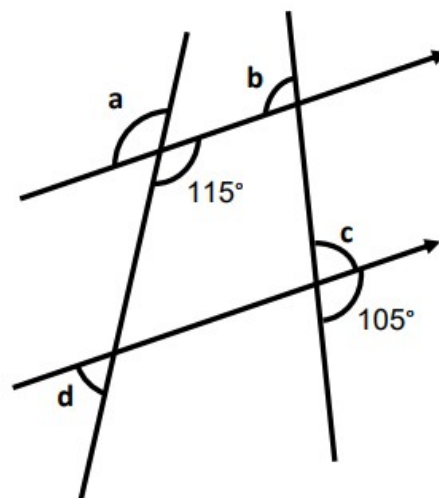
Which diagram shows which rule?

1. Complete these sentences about the angles in this diagram:



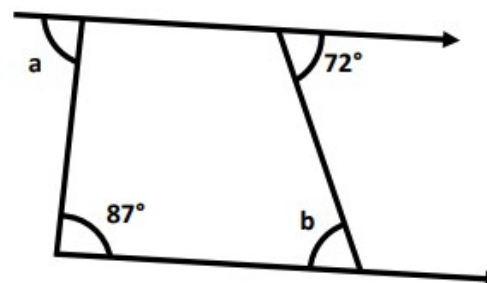
- Angles A and are corresponding angles.
- Angles F and are alternate angles.
- Angles D and are opposite angles.
- Angles F and are co-interior angles.
- Angles E and C are angles.
- Angles D and E are angles.
- Angles G and D are angles.
- Angles E and H are angles.

2. Calculate the size of angles **a**, **b**, **c** and **d**.



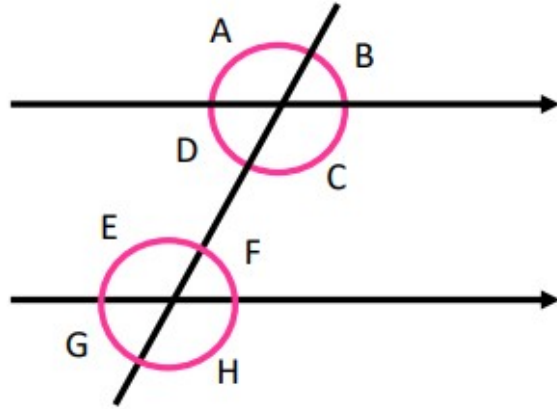
$a^\circ =$	<input type="text"/>	$b^\circ =$	<input type="text"/>
$c^\circ =$	<input type="text"/>	$d^\circ =$	<input type="text"/>

3. Calculate the missing angles:



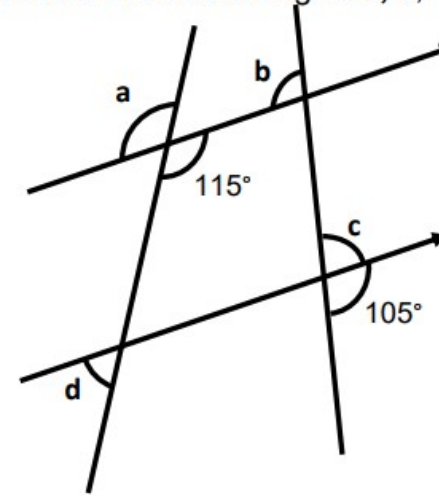
$a^\circ =$	<input type="text"/>	$b^\circ =$	<input type="text"/>
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1. Complete these sentences about the angles in this diagram:



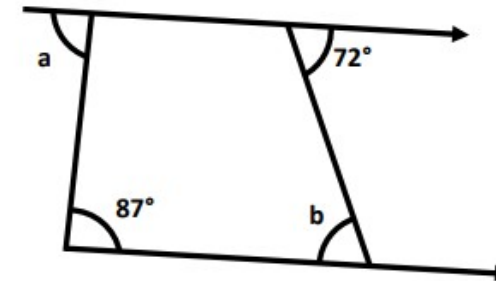
- Angles A and **E** are corresponding angles.
- Angles F and **D** are alternate angles.
- Angles D and **B** are opposite angles.
- Angles F and **C** are co-interior angles.
- Angles E and C are **alternate** angles.
- Angles D and E are **co-interior** angles.
- Angles G and D are **corresponding** angles.
- Angles E and H are **opposite** angles.

2. Calculate the size of angles **a**, **b**, **c** and **d**.



$a^\circ =$	115°	$b^\circ =$	105°
$c^\circ =$	75°	$d^\circ =$	65°

3. Calculate the missing angles:



$a^\circ =$	87°	$b^\circ =$	72°
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Fill in the letters of the missing angles in your book, write what rule you used to find them

